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Microtetrameres sp. (Nematoda: Tetrameridae)
Host and Geographic Records Extended

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ELLIS, CHARLES J. and G. CALDERWOOD (Department of Zoology, Iowa State University, Ames IA 50011). *Microtetrameres* sp. (Nematoda: Tetrameridae) Host and Geographic Records Extended. Proc. Iowa Acad. Sci. 84 (1)30-31, 1977. Host and geographic records of *Microtetrameres* sp. are

extended. One hundred thirty-eight birds were examined including 10 genera, 10 species and 5 families. Two species were infected with *Tetrameres* sp., one with over 40 females.

Table 1. Iowa hosts of female *Microtetrameres* sp.

Avian species*	Family*	No. Males**	No. Females**	No. (a) ? Sex**	Total	Infection percent
Sora <i>Porzana carolina</i> (Linnaeus)	Rallidae	1	1(1) ^b	3	5	0.0
House wren <i>Troglodytes aedon</i> (Vieillot)	Troglodytidae	1	0	4	5	0.0
Long-billed marsh wren <i>Telmatodytes palustris</i> (Wilson)	Troglodytidae	0	0	3	3	0.0
Swainson's thrush <i>Catharus ustulata</i> (Nuttall)	Turdidae	4(2)	6(2)	1	11	54.5
Black-and-white warbler <i>Mniotilta varia</i> (Linnaeus)	Parulidae	1	5(1)	12(2)	18	16.6
Chestnut-sided warbler <i>Dendroica pensylvanica</i> (Linnaeus)	Parulidae	4	8(1)	2	14	7.1
Ovenbird <i>Seiurus aurocapillus</i> (Linnaeus)	Parulidae	12(1)	12	35(1) ^b	59	1.6
Mourning warbler <i>Oporornis philadelphia</i> (Wilson)	Parulidae	2(1)	4	4	10	10.0
American redstart <i>Setophaga ruticilla</i> (Linnaeus)	Parulidae	3	3	0	6	0.0
Indigo bunting <i>Passerina cyanea</i> (Linnaeus)	Fringillidae	3	2	2(1)	7	14.3
	TOTALS	31	41	66	138	
	Infections	4	6	3	13	9.4

* = Names according to American Ornithologists' Union check-list (as revised in The Auk, 1973, 90:411-419, as corrected).

** = Numerals in parentheses indicate number of hosts infected.

^a = Sex unknown because of gonadal deterioration.

^b = Host infected only with *Tetrameres* sp. (female).

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Because the typical survey of birds parasitized by the nematode genus *Microtetrameres* is based upon a relatively small number of hosts, an offer to examine hundreds of birds for this parasite was quickly accepted. These birds, collected during 1974 migration by the Fish and Wildlife Biology Section of the Department of Zoology and Entomology, Iowa State University, Ames, Iowa, had been killed in collision with a nearby television transmitting tower. Once the birds were transported to the laboratory they were identified, frozen and stored.

MATERIALS AND METHODS

We examined the proventriculi of 138 birds not knowing how long they had been frozen, but some could have been in this state for as long as two years. Each host was thawed overnight, necropsied within twenty-four hours and *Microtetrameres* females recovered.

RESULTS

The 138 bird hosts represented 5 families (Table 1). Thirteen specimens were parasitized with *Microtetrameres* sp. females, two with female *Tetrameres* sp. and one with an unidentified male nematode. All females were adult and showed the characteristic red coloration. Results are summarized in Table 1.

This survey represents host and geographic records for *Microtetrameres* sp. in all host species listed. However, *Microtetrameres inermis* von Linstow has been reported (Ellis, 1971) in *Troglodytes troglodytes* although discrepancies in its measurements have not been resolved (Ellis, 1967). One female sora, *Poezana carolina*, was parasitized with 40 female *Tetrameres* sp. (Table 1).

DISCUSSION

Initially, we postulated that species identification of parasites would be inaccurate because they had been frozen. This hypothesis was not nullified until late during the project when we learned such identification within this genus is possible. However, *Microtetrameres* females from only one host were so identified.

Because of the demonstrated stability of egg dimensions of this nematode genus (Ellis, 1969) and despite the possibility these dimensions may have expanded slightly because of host treatment

between collection and dissection, comparisons of certain dimensions of females found in one black-and-white warbler, *Mniotilta varia*, indicated the species to be *Microtetrameres pusilla* Travassos. This diagnosis was based upon buccal capsule width and length-width measurements of eggs (R/length = 50.4 – 46.8 μ m, ave. = 47.8 μ m; R/width = 31.2 – 26.4 μ m, ave. = 29.4 μ m). However, *M. pusilla* reportedly possesses longitudinal furrows (Travassos, 1915, 1919). Yet, these structures have not been reported on other individual or species in this genus. Therefore, stable dimensions such as buccal capsule width and egg measurements cause us to ignore these furrows and to conclude that these females were *Microtetrameres pusilla*.

Data listing avian species which were not hosts for *Microtetrameres* sp. have been reported (Ellis, 1967).

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